SUMMARY OF THE PROFICIENCY TESTING COMMITTEE MEETING DECEMBER 19, 2000

The Proficiency Testing (PT) Committee of the National Environmental Laboratory Accreditation Conference (NELAC) met by teleconference at 1:00 p.m. Eastern Standard Time (EST) on Tuesday, December 19, 2000. The meeting was led by its chair, Ms. Barbara Burmeister of the Wisconsin State Laboratory of Hygiene. *The main purpose of this meeting was to discuss data reporting issues and new comments received.*

INTRODUCTION

Ms. Burmeister reviewed the minutes from the teleconference on December 5, 2000. The committee agreed that the minutes are final. The status of the Action Items is as follows:

- Ms. Burmeister forwarded the revised PT implementation straw man document from Mr. Chuck Wibby to the committee for approval. Once approved, she sent it to Ms. Silky Labie of the National Environmental Laboratory Accreditation Program (NELAP) Accrediting Authority Group.
- Mr. Anand Mudambi was not present to report on the status of the Quick Response/Corrective Action subcommittee.

PT SUBCOMMITTEE ISSUES STATUS

There are no updates for either the Reporting Format subcommittee or the Quick Response/Corrective Action Studies subcommittee.

DATA REPORTING ISSUES DISCUSSION

PT Provider Summary (Chuck Wibby)

Mr. Wibby reviewed some of the main questions asked of the PT providers in a recent survey. Ms. Burmeister would like to provide guidance for these issues in the form of Frequently Asked Questions (FAQs). Once the draft FAQs are complete, they will be sent to the Accrediting Authority Workgroup for review.

First, providers were asked about how they reported alphanumeric characters in results (e.g., "Not Detected (ND)"or "Below Detection Limit (BDL)"). Most responded that they reported "No Eval" (or "no evaluation") per guidelines from the U.S. Environmental Protection Agency (EPA) National Standards. Mr. Wibby was satisfied that the committee could implement similar guidelines for NELAC. Mr. Matt Caruso commented that most databases are not set up to evaluate alphanumeric characters. It would be up to database operators to make changes to their system. He recommended that a non-detect value be reported in a "less than" format (e.g., < 10), otherwise it should be interpreted as a "No Eval." Ms. Burmeister said that she would draft a FAQ for this issue.

Second, providers were asked how they report to the accrediting authorities when results are left blank by the laboratories. Mr. Wibby said that eight providers responded to this question and their answers differed significantly. He recommended that the PT Committee take the lead on this issue. He also recommended that the committee work with the Accrediting Authority Workgroup and find out what they want to see on their reports. A committee member recommended that if a result is left blank, it should be reported as a "No Eval" to the accrediting authority. He reasoned that there was no difference between a blank result and a result of "Not Acceptable." He said that if a laboratory does not report a result, then the provider should not report a result to the accrediting authority. Therefore, blank results will not be scored. Ms. Burmeister asked Ms. RaeAnn Haynes to draft a FAQ for this issue to which she agreed.

Third, providers were asked about how they score assigned values of zero. Mr. Wibby suggested that a FAQ might borrow language from the laboratory certification bulletin article. He said that this is a complicated issue and does not see a short answer. In discussion, a committee member asked what happens if a detection limit is not as low as it should be. The accrediting authority will not know what the detection limit is. The PT provider will have a better idea, but cannot be sure. Ms. Haynes said that Oregon Department of Environmental Quality (DEQ) looks at raw data during onsite inspections. She said that the biggest problem is in review of PT results because it is so time-consuming. The laboratory is driven by working limits. Another person commented that if the PT sample is designed so that concentrations are widely spread (some analytes spiked at very high levels and some at very low levels), it puts the laboratory in jeopardy of not detecting all analytes. A committee member suggested that they use either "less than" the method detection limit (< MDL) or the number zero. Both Mr. Caruso and Ms. Haynes said that they did not want the number zero to be used. It will be up to the PT providers to translate values to zero for reporting to EPA. Ms. Burmeister will draft a FAQ for this issue.

METHOD CODES UPDATE

Mr. Ralph Obenauf said that there has been no activity on the development of method codes since the last meeting. The method codes will be eight characters in length and Mr. Obenauf is considering implementing a check digit algorithm when developing the codes.

FREQUENTLY ASKED QUESTIONS (FAQS)

Ms. Burmeister reviewed the latest revisions to the FAQs. She said that she added the website addresses as suggested by Ms. Cindy Nettrour. The last version of the FAQs posted on the NELAC website is dated April 1999. A more recent version had been submitted, but was never posted. Because of this, Ms. Burmeister felt that it is important to get the latest version up as soon as possible. She will send the FAQs to Ms. Jeanne Hankins. The new FAQs discussed today will be appended later, as they are completed.

The committee had considered developing a FAQ for use of the NELAC PT Field of Testing tables. Ms. Burmeister questioned whether this is necessary. She asked committee members to think about it, and they will continue discussions later.

COMMENTS/QUESTIONS RECEIVED

Chuck Wibby

Mr. Chuck Wibby said that he is still having problems with the interpretation of "30 days apart" in Section 2.7.2. The language can be interpreted as "30 days between start dates," "analyzed 30 days apart," or "30 days after the end of the study." Ms. RaeAnn Haynes said that the Accrediting Authority Group is fairly open and will be receptive to any guidance given to them. Mr. Wibby agreed to draft new language to clarify Section 2.7.2 and will bring the topic up for discussion with the Corrective Action subcommittee.

Pete Priniski

A question was received from Mr. Pete Priniski regarding the analysis of performance evaluation (PE) samples for volatile organic compounds (VOCs) in soil. He said that his laboratory routinely performs analyses for medium level "methanol preserved" samples as described in SW-846 8260. Mr. Priniski said that the PE samples would be more useful if they were supplied to the laboratory as spiked soils that are methanol preserved, just as their routine samples. He was told that this preparation does not meet the requirements of NELAC. Mr. Priniski requested insight from the PT Committee on this matter. One committee member responded that PE samples currently cannot be made that are both homogeneous and stable. The committee knows that research is being done in this area, but these types of samples will not be available in the near future. Also a PT provider will never be able to match exactly every combination of analytes and concentration ranges that a laboratory analyzes for. PT samples are designed to challenge a laboratory's ability to perform all aspects of a method regardless of concentration range and preparation method. Additionally, accreditation is not currently by extraction/preparation method. The committee also discussed his practice of obtaining blank soil and spiking solution and making his own low level samples. This practice is very good for his internal quality system procedures but the samples will not meet the NELAC PT requirements and cannot be used for accreditation purposes. Ms. Burmeister will draft a response to Mr. Priniski.

Jack Ruckman and Donald LaFara

Mr. Jack Ruckman and Mr. Donald LaFara, from the Nevada State Health Department, submitted proposed changes in corrective action requirements for proficiency testing. They described a problem regarding corrective action relating to the policy that a laboratory must maintain a record of having passed two of the last three performance tests. If the laboratory is not successful on a performance test, the desired response is that it will perform the necessary corrective action and confirm that it was successful by passing a performance test. Based upon the manner in which supplemental studies are currently handled, additional studies are not distinguished from routinely scheduled studies. They gave examples to describe the problem and proposed the following change to Section 2.7.4 (proposed text is underlined):

> "It shall then document in its own records and provide to the Primary Accrediting Authority both the investigation and the action taken." <u>The laboratory must confirm the corrective action by successfully analyzing a blind PT sample obtained from an approved Proficiency Test Provider.</u> "If a laboratory fails ..."

Mr. Ruckman and Mr. LaFara believe that making the make-up PT mandatory will help the laboratory to assess the efficacy of their corrective action, and will give the AA confidence that the problem has been resolved and that the laboratory is again producing good data.

The PT Committee responded that it is up to the laboratory to rectify any problems and decide whether or not to run a corrective action sample. Corrective action samples are voluntary and the committee does not intend to force a laboratory to participate. Accrediting authorities have other mechanisms in addition to proficiency testing to assess the performance of a laboratory. Ms. Burmeister will draft a response to Mr. Ruckman and Mr. LaFara.

Ken Jackson

Dr. Ken Jackson submitted comments to the PT Committee from the state of New York. First, Dr. Jackson said that they have identified a number of analytes that they proficiency test in NY, but were omitted from the published PT fields of testing (even though the analytes are in the accreditation fields of testing). This puts NY between a "rock and a hard place," since their program requirements specify that laboratories must do PTs for these analytes. However, they are not allowed to require laboratories to do the PTs under NELAC. He requested that the following be added to the PT fields of testing as soon as possible:

Potable Water (Safe Drinking Water Act):
- Pesticides (Metalochlor; Metribuzin; Carbaryl; 3-Hydroxy-carbofuran)
- Radiochemical (Gross alpha; Gross beta; Ra-226; Ra-228)

Non-Potable Water (Clean Water Act):
- Organophosphate pesticides (Azinphos methyl; Demeton-o; Demeton-s; Diazinon; Disulfoton; Malathion; Parathion ethyl; Parathion methyl)

Solid & Hazardous Waste (Resource Conservation and Recovery Act):
- Purgeable halocarbons (2-chloroethylvinyl ether; dichlorodifluoromethane; 1,1-dichloroethane; cis-1,3-dichloropropene)
- Organophosphate pesticides (Azinphos methyl; Demeton-o; Demeton-s; Diazinon; Disulfoton; Malathion; Parathion ethyl; Parathion methyl)

Miscellaneous:
- Atrazine, Carbaryl

Second, Dr. Jackson said that they have serious concerns about scoring unspiked analytes (non-detects). Specifically, as the standard is now written, a laboratory can lose accreditation for an analyte by failing 2 out of 3 PTs in samples where the analyte was present (i.e., quantitation required), and can then get its accreditation back by passing 2 PTs where the analyte was not present and it correctly reported "0" (or "< MDL" etc.). Dr. Jackson said that it should not be acceptable that a laboratory can get accreditation back without having to quantitate.

For example, Dr. Jackson said that if a laboratory has lost accreditation for benzene, then it should be required to quantitate benzene twice, and it would have to do this by specifically requesting PT samples with benzene in them. This will require the standard to be modified so

that PT providers can make "old" samples available for this purpose. The Corrective Action subcommittee is currently working on this issue.

Third, if unspiked analytes are scored, there should be a mechanism in place to ensure that all analytes must sometimes be present; i.e., it should not be possible for a laboratory to continue accreditation for a given analyte by repeatedly having to only report a non-detect. Dr. Jackson suggested going back to the idea of having providers rotate their list of spiked analytes rather than doing it randomly.

In response, Mr. Caruso said that random selection can routinely leave out certain analytes. This is not likely, but can happen, especially over a short term. There used to be language in the NELAC Standard to rotate through analytes, but this was changed to match the EPA National Standards. Ms. Burmeister said that she will look for the old language and send it to the committee to consider. Ms. Burmeister also suggested that the Corrective Action subcommittee take the first stab at solutions for these problems.

PT FIELDS OF TESTING DISCUSSION

Due to lack of time, discussion on the PT Fields of Testing has been deferred to the next meeting.

MEMBERSHIP AND OUTREACH COMMITTEE UPDATE

Ms. Cindy Nettrour was absent and therefore unable to report on updates from the Membership and Outreach Committee.

EPA/NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST) ITEMS

The committee discussed a letter (dated November 13, 2000) from Mr. Ray Wesselman, Chief, Environmental Contaminant Characterization Branch, Ecological Exposure Research Division, regarding EPA's review of PT data submitted to the EPA PT database. The letter provided a summary table of six categories, number of analytes, number of data points, and analytes which required further investigation. The letter also provided a short conclusion stating that except for mercury, they "found no data to support a conclusion that the samples were improperly prepared."

Ms. Burmeister asked committee members for input regarding this letter. One member noted that there was no time frame indicated for the data reviewed. Another commented that the number of data points seemed low and that they had expected a more substantial review of the data by EPA. A third committee member pointed out that while the list of analytes had been questioned in the review, there was no indication of followup. The committee would like more feedback on problems encountered. Ms. Burmeister asked committee members to consider whether this kind of oversight is valuable, and if there is something more the committee should ask for.

MISCELLANEOUS

The next teleconference meeting for the PT Committee will be held on January 16, 2001.

Attachment A

ACTION ITEMS
PROFICIENCY TESTING COMMITTEE MEETING
DECEMBER 19, 2000

Item No.	Action	Date to be Completed
1.	Ms. Barb Burmeister will draft a Frequently Asked Question (FAQ) on the reporting of alphanumeric characters.	
2.	Ms. RaeAnn Haynes will draft a FAQ on handling of blank results.	
3.	Ms. Burmeister will draft a FAQ on handling assigned values of zero.	
4.	Mr. Chuck Wibby will draft a FAQ on the 30-day requirement and send it to Ms. Burmeister.	
5.	Ms. Burmeister will draft responses to comments from Mr. Pete Priniski, Mr. Jack Ruckman, and Dr. Ken Jackson.	
6.	Ms. Burmeister will look for old language from the NELAC standards about rotation of analytes in PT samples and send it to the committee.	
7.	The Corrective Action subcommittee will take the first stab at solutions for Dr. Ken Jackson's comments.	

Attachment B

PARTICIPANTS

PROFICIENCY TESTING COMMITTEE MEETING

DECEMBER 19, 2000

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